Research Paper | Zoology | E-ISSN No : 2454-9916 | Volume : 7 | Issue : 9 | Sep 2021

STUDY OF DIVERSITY OF HELMINTHES PARASITES IN FRESH WATER FISHES OF CHANKAPUR DAM SITUATED IN NASHIK TRIBAL ZONE

S. J. Pawar[1] | B. C. Kachhava[2] | M. D. Wagh[2]

[1]Department of Zoology K.E.S.A.C.S College Kalwan (Manur) Pin-423501 Tal- Kalwan Dist-Nashik (Maharashtra), India.
[2]Department of Chemistry K.E.S.A.C.S College Kalwan (Manur) Pin-423501 Tal- Kalwan Dist-Nashik (Maharashtra), India.

ABSTRACT

Fishes are useful as well as harmful to human being. They have considerable economic importance. All fish carry pathogens and parasites. Today there is very less work on parasites which are occurring in fishes of chankapur dam. The present status of our knowledge on helminthes parasites of fishes in the chankapur dam is reviewed in the lite of the result of a recent investigation on fishes caught from chankapur dam waters.

Diversity of digenetic trematodes, nematodes and cestodes in fishes of the chankapur dam are presented together with a discussion on certain aspects of the relationships between these helminthes with their respective fish hosts. Study of diversity of helminthes parasites in fresh water fishes of chankapur dams carried from period of one year. i.e. June 2019 to May 2020. So, in present investigation attempt has been made to evaluate the diversity of parasite from fresh water fishes.

KEYWORDS: Helminthes, parasites, cestodes, trematodes.

INTRODUCTION:

India has a great potential of production of fish resources only because of its huge coastline and inland water resources. Fishery provides good economical option to the Indian agriculture. Studies show that the certain adequate changes in the environment of the fishes may leads to certain emerging health issues such as histopathological problems and pathogenic infections genetic disorders etc. most of the pathogenic infections commonly observed in the fishes and responsible for decrease fish production of the aquaculture practices. Bacteria, viruses are mainly associated with pathogenic infection in fishes.

They make several physical and chemical damages on fish. Several types of parasites have been observed on fish lamellae or gills. They study prevalence of helminth parasites in domesticated animals. Most of helminth parasites found in vertebrates belongs to phyla. i.e. Nematohelminthes, Aschelminthes, Platyhelminthes (Scholz, 1997). Stress in fishes and disease outbreak may cause in the fish due to the drought, pollution (Schroder, n.d.). Several pathogens leads to the viral infection, bacterial infection such as Psudomonasflurescens leading to fin rot and fish dropsy diseases. Several helminth Parasites such as Trematode, Nematode, Cestode can lead to the several other diseases to the fish parasite outbreak occurs when they quality of aquatic bodies decreases. Most of the fishes several diseases, which is become a several issue. Infected or dead fish also become the reasons of infection in the fishes.

MATERIAL AND METHODS:

Collection of fish samples:

The fish species available in the chankapur dam was collected at different site with help of local fisherman site –

- Girna River Backwater.
- Bhagu, Danoli water.
- Chankapur village.

Identification of fishes:

For taxonomic identification of fish it is to know Salient characters of fishes which is helpful for the classification of fish species. These identifications characters are may be used for their classification (Joshi & Sreekumar, 2015). Different cycles from different Sampling were identified using protocol (Jayaram, 1981).

Identification of parasites:

The collected fish samples are initially dissected in normal saline water for the organs such swimming bladder, gills, stomach, liver, alimentary canal etc. fish organs where washed with the help of distilled water to reduce intestinal contents. After washing the parasites were preserved in 1% formaldehyde solution for the identification purpose the parasitic warms are stained with hematoxylin and pass through several alcoholic grades. Before mounting the parasites on the slides fixed using DPX, the stained parasites helimenth parasitic warms is done by using standard protocol(Wardle et al., 1974) (Yamaguti, 1959).

RESULT AND DISCUSSION:

Study of diversity of helminthes parasites in freshwater fishes of chankapur dams carried for period of one year i.e. June 2019 to May 2020. The efforts have been made to study the effect of solution and parasitism on the 10 native fishes i.e. Labeopangusia, Catla cutla, Channa marulius, pangasianodon hypophthalmus, Wallago attu, Labeo rohita, Labeopangusia, Clarias batrachus, Macroganthus Pancalus, pangasianodon hypothalamus.

The present study would help to establish a baseline for determining the diversity of different helminthes parasites on fish and which would subsequently help to improve fish health by advancing the knowledge of important fish host parasite and environment interactions.

Six different sites were selected for the study diversity of helminthes on fresh water fishes in Chankapur dam. The fish samples were collected at this site with the help of local people. The fishes were collected according to their local name. The above fish species were located according to their availability. The collected parasites were stored and stained by using standard procedure. The given species of helminth parasite has been observed in fresh water fish.

Table 1: The species of helminth parasite found in fresh water fishes of Chankapur dam.

Sr. no	Name of fish species	Common Name	Family	Helminth parasite observed
1	*Labeopangusia*	Kanas	*Cyprinidae*	*Micro-cotyloides*
2	*Catla cutla*	Catla	*Cyprinidae*	*Brahamputratrema sp*
3	*Channa marulius*	Maral	*Channidae*	*Camallanus ana bantis*
4	*Piaractus brachypomous*	Helwa	*Chariacidae*	*C.trichuris*
5	*Wallog aattu*	Balu	*Siluridae*	*Parascarophis sp.*
6	*Labeo rohita*	Rohu	*Cyprinidae*	*Asymphylodora kedarai.*
7	*Lebeo pangusia*	Kanas	*Cyprinidae*	*Microcotylodies sp.*
8	*Calariars batrachus*	Mangur	*Clarridae*	*Pomphorhynchus kashmirensis*
9	*Macrognathus panculus*	Vam /Eel	*Mastacembelidae*	*Cosmoxynemoidnandusi sp.*
10	*Pangasianodon hypophthalmus*	Pankaj / chopada	*Pangasiidae*	*Euclinostomum heteroatom*

CONCLUSION AND FUTURE SCOPE:

The following parasites were abundantly found during investigation in fresh water fishes of Chankapur dam Nashik district.

Sr.no.	Parasites
1	Micro-cotyloides
2	Brahamputratrema sp
3	Camallanus ana bantis
4	C.trichuris
5	Parascarophis sp.
6	Asymphylodora kedarai.
7	Microcotylodies sp.
8	Pomphorhynchus kashmirensis
9	Cosmoxynemoidnandusi sp.
10	Euclinostomum heteroatom

With the help above study we come to know abundance of parasites in fresh water fishes and cause damage to it which leads to loss of food quality of fishes.

REFERENCES:

I. Jayaram, K. C. (1981). Freshwater fishes of India, Pakistan, Bangladesh, Burma and Sri Lanka.

II. Joshi, K. K., & Sreekumar, K. M. (2015). Basics of sample collection, preservation and species identification of finfish.

III. Scholz, T. (1997). A revision of the species of Bothriocephalus Rudolphi, 1808 (Cestoda: Pseudophyllidea) parasitic in American freshwater fishes. Systematic Parasitology, 36(2), 85–107.

IV. Schroder, B. S. (n.d.). Bergmann et al.(45) Date of Patent: Mar. 3, 2015.

V. Wardle, R. A., McLeod, J. A., & Radinovsky, S. (1974). Advances in the zoology of tapeworms, 1950-1970.—274 pp. Minneapolis.

VI. Yamaguti, S. (1959). STUDIES ON THE HELMINTH FAUNA OF JAPAN -Part 54. TREMATODES OF FISHES, XIII-. Publications of the Seto Marine Biological Laboratory, 7(2), 241–262. https://doi.org/10.5134/174607